

**Patent Claims**

1. A device for testing a safety valve (2) installed on a pressure tank, said valve having a cone (4) and a valve seat (6), whereby a spring (8) presses the cone (4) against the valve seat (6),
  - having a tie rod (22) that is connected to the cone (4), that has a latching element (26) and that prescribes a longitudinal direction;
  - having a counter flange (30) arranged in the longitudinal direction at a prescribed distance from the valve housing (17) of the safety valve (2);
  - having a force sensing device (34) that can be moved and fixed relative to the counter flange (30);
  - and having connection means for detachably connecting the force sensing device (34) to the tie rod (22),characterized in that
  - a latching hook (40) is provided as the connection means that is connected to the force sensing device (34) and that is detachably engaged with the latching element (26) of the tie rod (22);
  - whereby the tie rod (22) can be moved independently of the latching hook (40) along the entire lift in the opening direction of the safety valve (22).
2. The device according to Claim 1, characterized in that the tie rod (22) is inserted in a sealing manner through the valve housing (17) of the safety valve (2).
3. The device according to Claim 1 or 2, characterized in that the latching element (26) is arranged on the end of the tie rod (22) that faces away from the cone (4).

4. The device according to one of Claims 1 through 3, characterized in that the latching element (26) is configured as a depression (28), preferably as a circumferential groove.
5. The device according to Claim 4, characterized in that, at its end facing the counter flange (30), the depression (28) has a contact surface (44) for the latching hook (40) and, at the end that faces away from it, a preferably conical, rising sliding surface (46).
6. The device according to one of Claims 1 through 3, characterized in that the latching element is configured as a flange (54).
7. The device according to one of Claims 1 through 6, characterized in that a threaded rod (36) is connected to the force sensing device (34) and, on the counter flange (30), there is a screw nut (38) to move the force sensing device relative to the counter flange (30).
8. The device according to one of Claims 1 through 7, characterized in that the latching hook (40) is rotatably attached to the force sensing device (34) by means of a hinge connection (48).
9. The device according to Claim 8, characterized in that a spring (50) pretensions the latching hook (40) against the direction of engagement with the tie rod (22).

10. The device according to Claim 8, characterized in that a spring (50) pretensions the latching hook (40) in the direction of engagement with the tie rod (22).
11. The device according to Claim 10, characterized in that the end of the latching hook (40) facing the tie rod (22) has a slanted sliding surface (52) that rises starting at the side that faces the tie rod (22) towards the outside, as seen from the direction of the force sensing device (34).
12. The device according to one of Claims 8 through 11, characterized in that a lever (71) is connected to the latching hook (40) that allows the latching hook (40) to be moved against the force of spring (50).

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